

1 1. A method of transmitting a sub-packet in a parallel channel encoder packet transmission
2 system comprising the steps of:
3 attaching a sequence identifier, a user identifier and a encoder packet identifier to
4 a first sub-packet to produce a first sub-packet with identifiers; and
5 transmitting the first sub-packet with identifiers to a user indicated by the user
6 identifier.

1 3. The method of claim 1, wherein the sequence identifier comprises more than one bit for
2 indicating a transmission sequence of the first sub-packet.

1 5. The method of claim 1, wherein the encoder packet identifier comprises two bits if the
2 parallel channel encoder packet transmission system has four channels.

1 6. The method of claim 1 comprising the additional steps of:
2 receiving a NACK from the user identified by the user identifier;
3 attaching a second sequence identifier, the user identifier and the encoder packet
4 identifier to a new version of the first sub-packet to produce a new version sub-packet
5 with identifiers, the new version first sub-packet being soft combinable with the first sub-
6 packet, the second sequence identifier indicating that the new version sub-packet is a re-
7 transmission of the first sub-packet; and
8 transmitting the new version first sub-packet with identifiers.

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- 1 8. The method of claim 6, wherein the first sub-packet and new version of the first sub-
2 packet are not identical.
- 1 9. The method of claim 6, wherein the first sub-packet with identifiers and the new version
2 first sub-packet with identifiers are transmitted over different channels.
- 1 10. The method of claim 6, wherein the first sub-packet with identifiers and the new version
2 first sub-packet with identifiers are transmitted over different channels.
- 1 11. A method of receiving a sub-packet in a parallel channel encoder packet transmission
2 system comprising the steps of:
3 receiving at a receiver a sub-packet with a user identifier, a sequence identifier
4 and an encoder packet identifier;
5 determining if the received sub-packet is intended for the receiver using the user
6 identifier;
7 determining if the received sub-packet is a re-transmission of a previously
8 received sub-packet using the sequence identifier; and
9 if the received sub-packet is a re-transmission of a previously received sub-
10 packet, soft combining the received sub-packet with a previously received sub-packet
11 having an identical encoder packet identifier.
- 1 12. The method of claim 11, wherein the received sub-packet and the previously received
2 sub-packet having the identical encoder packet identifier were received over different
3 channels.
- 1 13. The method of claim 11, wherein the received sub-packet and the previously received
2 sub-packet having the identical encoder packet identifier were received over identical
3 channels.